

Amendments to the Specification

Please replace the paragraph starting at page 6, line 15, with the following amended paragraph.

According to the invention, the gate oxide layer [14] 16 is irradiated with a silicon-containing species under low partial pressure, high vacuum conditions to deposit (nucleate) a thin layer 18 of silicon onto the surface [16] of the gate oxide layer [14] 16, as shown in **FIG. 2**. The silicon layer can comprise polysilicon or amorphous silicon. The processing conditions results in a silicon layer 18 that is thinner than can be achieved under standard silicon growth conditions, i.e., a temperature greater than 600°C, and a pressure greater than 100 mTorr, with SiH₂, Si₂H₇, or dichlorosilane (DCS, SiH₂Cl₂). Preferably, the silicon layer 18 is less than about 30 angstroms, preferably about 10 to about 20 angstroms thick. Exemplary silicon source materials include SiH₂Cl₂, silicon tetrachloride (SiCl₄), and a silicon that contains a hydride such as silane (SiH₄), and disilane (Si₂H₆). The silicon material can be deposited as a layer utilizing any known deposition process including plasma enhanced chemical vapor deposition (PECVD), low pressure chemical vapor deposition (LPCVD), and rapid thermal chemical vapor deposition (RTCVD).